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Seeing the light – finding the poetic content of design objects

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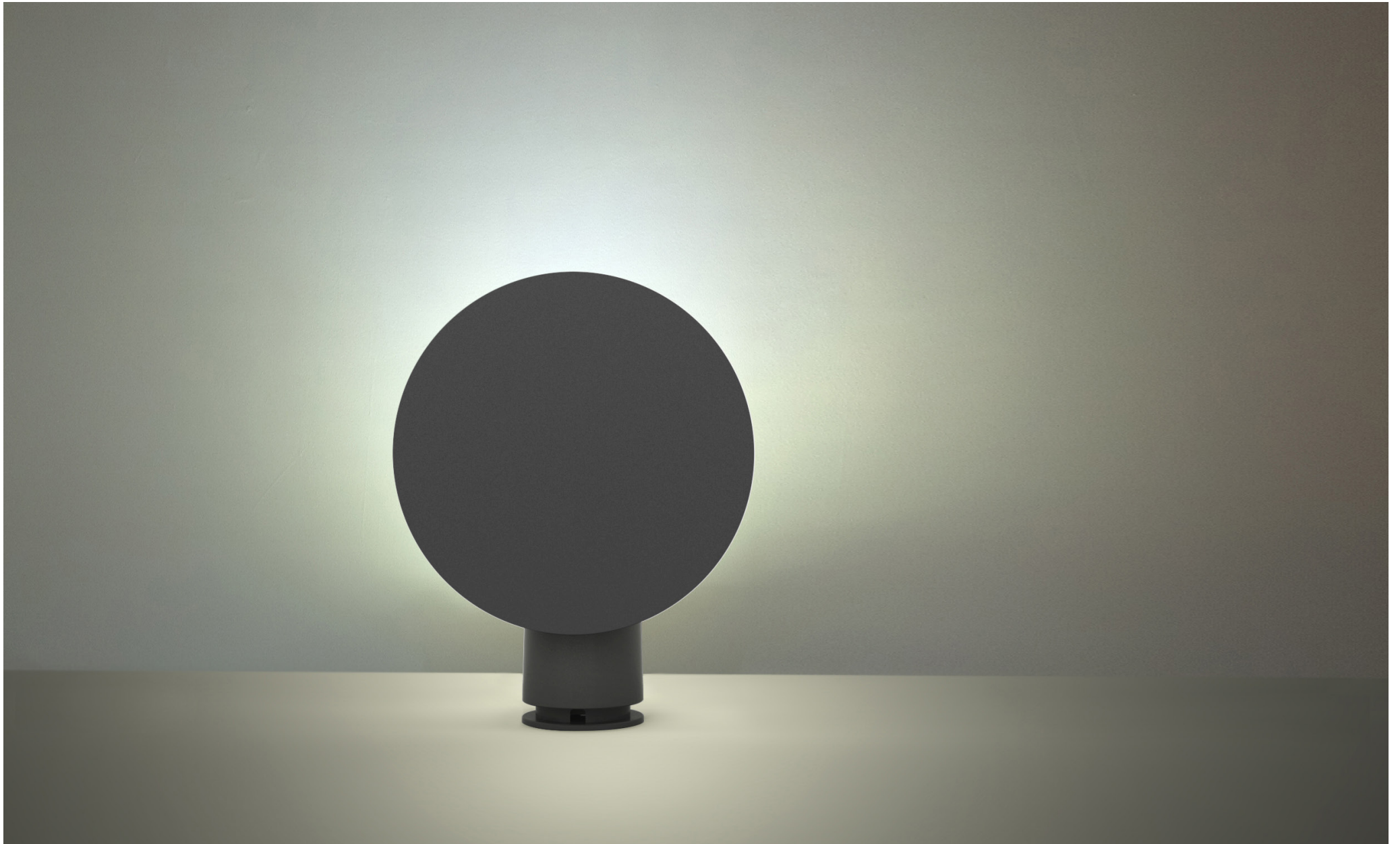
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Abstract: This paper presents the process and initial results of a research through design project attempting to understand the poetic qualities of design objects. This exploration forms part of a PhD study addressing design artefacts as poetic objects- objects that both embed and conjure memory, association and imagination. The research examines the ways in which design objects can be poetic and how designers actively and knowingly use objects to poetic effect.

It is proposed that the poetic content of design artefacts can be located on a continuum ranging from the experiential - relating to how we perceive things - to the reflective and cultural. What unites these levels is the capacity of design objects to reveal and change our way of looking at things.

The practice uses the design of lighting as a vehicle for exploring the poetic meaning of designed objects more generally. Starting with the notion that lights do more than provide light, the current phase of practice examines the ways in which luminaires can mediate how we perceive and experience light and explores, in particular, the more nuanced and ephemeral qualities of light that escapes conscious attention.

Keywords: Light; Poetic; Phenomenology; Ephemerality.



Forsyth, Yee, Duncan and Thomas | Seeing the light – finding the poetic content of design objects



Defining ‘poetic’ ‘

“From designers we ask for a designed world that has meaning beyond the resolution of purely functional needs, one that also has poetry, communicates subtly something that makes sense, not just by fitting in with the culture and environment in which it lives, but by adding a new dimension to it” - Jane Fulton Suri (Clarke, 2011 p.16)

If objects can carry meaning (Attfield, 2000), then this research examines how designed artefacts can also carry poetic content (both as the poetic intentions of the designer and in a poetic interpretation on the part of the user or observer). In relation to design, the notion of the poetic has been used explicitly by a number of design researchers (Tsutsumi, 2007, Ionascu, 2009) and less directly in numerous accounts of the imaginative ‘content’ of design objects (as used, for example, in the work of Anthony Dunne and Fiona Raby (Dunne and Raby, 2013)). Nevertheless, there is no settled definition of the term poetic.

This research takes its definition of poetic from two main sources; ‘design poetics’ as developed by the designers Maxine Naylor and Ralph Ball (Naylor and Ball, 2005); and ideas of the poetic imagination based in phenomenology.

Naylor and Ball coined the term ‘design poetics’ as a way of describing their design practice. They offer the following definition:

poetic

In common usage, elevated expression of elevated thought. Transferred to design it refers to objects which are elevated above the pragmatic and formal requirement of the functional artefact, and deliver ambient observations in condensed form for reflection and contemplation. Like literary poetry, poetic design requires that to focus such observations poignantly, some of the normal constraints of functional pragmatism may be deliberately or selectively distorted or suspended. (Naylor and Ball, 2005 p119)

In their practice, Naylor and Ball manipulate mature products – objects, such as chairs, which have culturally established typologies – as a way of creating a ‘renewed awareness, appreciation and re-valuing of that which is already so much established as to have become culturally invisible’ (p24).

Whilst useful, Naylor and Ball’s design poetics is largely focused on the formal qualities of archetypal objects (or, as they put it, investing old forms with new meanings) and only touches on more immaterial and experiential manifestations of poetic design.

It is for this reason that this research is also informed by a broadly phenomenological understanding of 'poetic', as used by Bachelard and Heidegger amongst others. For Bachelard, the poetic derives from our sensory experience of the world which, in turn, can awaken memory and imagination (Bachelard, 1994). Thus, the imaginative and the real sit side by side and provide a richness to the other, suggesting that our perception of something in the real world and our imaginative images of the same thing augment each other (Kearney, 1998). Similarly rooted in our direct experience of the world, Heidegger's phenomenology is a stance which rouses us from our immersion in the world. For Heidegger, the 'poetic' is a way of making sense of our existence and 'reflects a deep human involvement in the world' (Sharr, 2007 p77). By analogy, design objects can be poetic if they offer a way of making sense of our existence and alter or reveal our perceptions.

To summarise, poetic objects, for the purposes of this research, can be regarded as having the following properties;

- designers use objects as a way of commenting on or reflecting their experience of the world;
- the objects allow for interpretation on the part of the viewer;
- the expressive qualities of the object go beyond its functionality;
- the objects draw on memory and association (both the designer's

own experience and the experiences of the viewer);

- the objects have the capacity to make us see anew things which have become either culturally invisible or, through habituation, escape our attention.

A framework for the poetic

The research further proposes that poetic design objects can be considered and critiqued against a framework. This framework is intended to identify how the poetic can manifest itself both in the material and immaterial properties of design objects and contends that our responses can range from the experiential to the cultural.

Though the framework is yet to be more fully developed, it proposes a continuum which can aid in locating the poetic properties of objects. At one end, the poetic elicits responses that draw on perceptual and sensorial experience (for this research, referred to as experiential poetics). At the other end, the poetic requires cultural knowledge and invokes cultural reference and engagement with wider narratives (cultural poetics). The unifying quality is the capacity for objects to elicit imaginative responses – 'Design objects both materialize imaginary meaning and enable meaning construction through the imaginary. Design objects mediate ideas and imaginings and make them concrete' (Folkmann, 2013 p.90).



It is intended that the framework will serve both as an aid to interpretation and critique of design objects and as a prompt for creativity. Ultimately, the goal is not to delineate, precisely, the various manifestations of the poetic within a given object – indeed, the research is premised on the idea that these manifestations may combine to positive effect – but to disentangle, through practice, the poetic qualities at play.

Lighting objects (luminaires) have been chosen as a vehicle for exploring this framework since there are creative possibilities both within their form and materiality and the in the nature of the light itself.

The practice

The outputs presented here represent early, exploratory practice focused on the experiential qualities of luminaires. As the research evolves, it is intended that further phases of practice will address other aspects of the framework.

The current practice responds both to technical possibilities offered by LED light sources (which promise to alter conventional understandings of what a luminaire is and does) and marks a conscious shift from previous design approaches adopted by the principal author. A brief re-appraisal of design intentions behind earlier design projects is presented to offer context.

Book Lamp (Forsyth, 2007), pictured, was produced in response to a brief from photonics researchers at the Danish Technical University who sought to demonstrate the relevance of their research into LED lighting to a broader public and, in particular, potential users of LEDs for interior lighting. Book Lamp exploited the reduced scale of LEDs by mounting diodes in a ‘reflector’ that resembles a book. In visual terms, the lamp

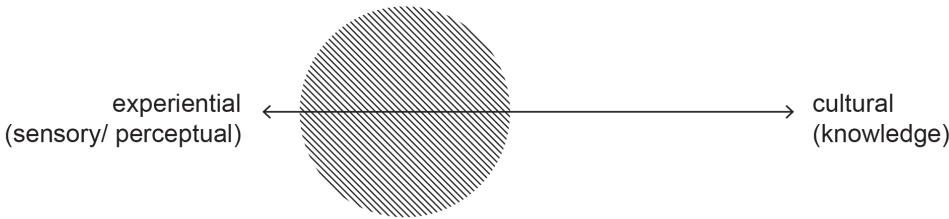


Figure 1. Simplified diagram of proposed poetic framework. The shaded area indicates the focus of the current practice.

borrowed the form and proportions of a paperback book. In terms of interaction, the lamp brightens and dims with the opening and closing of its covers. The luminaire therefore explored both formal and behavioural metaphors. Only on post-reflection did the designer become aware that the design was semi-consciously influenced by product semantics (for example, the work of Lisa Krohn at the Cranbrook Academy).

The use of metaphorical content in this piece, was part of the inspiration for the broader research into the poetic content of objects. But whilst borrowings from linguistics – such as metaphor – used for evocative effect are evident in semiotic and semantic approaches to design, objects are not like words. We experience things in their material, physical presence (Attfield, 2000) and this can be exploited to elicit more immediate sensory responses. To explore this sensoriality in relation to lighting means not only a consideration of the form and material of the lamp but also the qualities of the light emitted.

The current practice, then, marks a desire to examine the more immaterial qualities of light and its capacity to prompt a renewed sensitivity to our experience of the world.



Figure 2. Book Lamp (Author, 2007) Exhibited as part of Why Design Now Design Triennial at the Cooper Hewitt National Design Museum, New York.

Aims

The brief for the current phase of practice was, then, to design luminaires which serve to reveal the nuanced and varied qualities of light as a phenomenon. In other words, the luminaires should stimulate an awareness of the quality of light as an end in itself instead of, or beyond, any practical requirements to illuminate surrounding space. The aspiration for this phase of practice was to shift from using luminaires to see to seeing light.

Process

Two broad directions emerged through early concept sketches. One direction centered on the luminaire being used as a 'vessel' in which the form and material of the luminaire was exploited to contain and reveal light. These sketches envisaged that there would be relatively little illumination of surrounding space in favour of an interplay of light, form and material.

A second direction sought to draw attention to the ephemeral qualities of light as a conscious rejection of the conventional expectation that luminaires offer a constant and efficient spread of light. Pursuing this direction, the sketched luminaires took on increasingly simple forms with the intention that observers would become more conscious of the emitted light than the object itself. Whilst not seeking to hide the luminaire entirely, the author became conscious of a desire for the object to recede from view. As the practice developed, a decision was taken to pursue the latter direction and to revert to the more material and formal qualities of the luminaire itself in future creative phases.

Figure 3 (top right). Observations of atmospheric light effects
(<http://vimeo.com/109959852>)

Figure 4 (right). Experiments with refracted light
(<http://vimeo.com/109959851>)



As the practice increasingly drew inspiration from the shifting and nuanced qualities of light, the author became more consciously observant of light as a phenomenon. In essence, this involved adopting a phenomenological stance toward the experience of light. This has resulted in two main insights which have informed the practice. Firstly, that much of our experience of light (especially natural light) is liminal and escapes our conscious attention. And, secondly, that natural light (and shadow) is more nuanced, shifting and ephemeral than previously appreciated. While we may not register such changes, shifting patterns of light help to locate us, spatially and temporally, in our environment (Maier in Bockemuhl, 1985) – we ‘read’, for example, the weather and time of day in the length and movement of shadows cast by leaves upon the ground.

Just as changes in natural light can be related to atmospheric conditions, it became important that the light offered by the concepts should change in response to environmental changes. One concept, for example, envisaged an interior light dimming and brightening in response to clouds passing overhead. The presented outputs seek to create a similar connection between the light emitted and an external stimulus.

The outputs

Flicker

Candles have served as a metaphor for lighting design for many years – resulting in luminaires that resemble candles (and, in the case of Marcel Wanders’s BLO (Wanders, 2001), the action of blowing a candle out). Consistent with the idea that much of the subtler effects of light escape our immediate attention, Flicker is inspired by the play of candlelight on the surrounding environment. Though it is possible to buy LED candles which simulate the flickering of candles, these follow a pre-programmed, randomized pattern – an inauthentic or ‘fake’ experience.

The current concept was born as a way to evoke a more natural play of light. Consequently, the light flickers in response to air currents in the environment – a door opening, people walking-by, a gust through an open window. The intention is that, by isolating this quality, we can better reveal the ephemeral nature of candle light and how the play of light links us to our environment and events within it.

The concept employs a wind sensor coupled to an Arduino board. With programming to modulate the effect, an RGB LED dims and brightens in response to air currents passing across the sensor¹. It has taken a number of iterations to achieve the desired quality of light. The intention has never been to replicate, exactly, the play of light offered by a candle flame.



Nevertheless, the light should respond to air currents in a way that seems natural and without obvious technical mediation. Early attempts resulted in prototypes which brightened and dimmed with appropriate sensitivity to the movement of air over sensors but the cast shadows remained fixed. Later iterations incorporated movement of light and shadow by introducing an array of addressable LEDs. Further corrections created a sense of ‘fluttering’ as normally observed in candle flames ‘dancing’ in turbulent air.

The form of the luminaire is of secondary importance in line with the intention to direct the viewer’s gaze away from the luminaire toward emitted. But in considering a suitably unassuming character for the design of the luminaire itself, an interesting insight has emerged.

The concept has settled on two formal variants. One version hides the LEDs behind a disc of metal. The intention is that the viewer would not regard the source of the light – to be distracted by the ‘flame’ instead of the play of light on the environment. An alternative version, rejected for now, envisions the technology being embedded in a luminaire that closely resembles a light bulb. The emergence of these two possible manifestations of the concept has exposed an interesting creative choice that highlights, to the author, aspects of the poetic intent (and anticipated response) behind the project. Whereas the former version will, it is hoped, reveal to the ‘user’ ephemeral qualities of light, the latter concept might expose, and confound, expectations of how a light bulb behaves. In doing so, it offers a more pointed

commentary on the nature of artificial lighting and the overwhelmingly utilitarian concerns for efficiency, constancy and predictability². It is suggested that the light bulb variant of the concept embodies cultural poetics – since imaginative attention is drawn to cultural expectations (of how light bulbs should respond) and invites a critical response to our understanding of the ‘function’ of lighting

The simplicity of the form and the matt-black finish were chosen in order that the objects become silhouetted when lit – consistent with a desire that the object should ‘withdraw’ in order to foreground the surrounding play of light. The round reflector is a feature often employed in traditional candlesticks but the allusion is incidental rather than actively pursued. Indeed, it has been intentional that the concept does not make more direct references in product language to lighting typologies. Consequently, there is an acknowledged ambiguity to the form, especially when unlit.

For proper effect, it is anticipated that the concept would be used in a dimly-lit environment. This is, in part, to explore how luminaires can contribute to awareness of light for its own sake and not just as a means of illuminating a space for practical purposes. The requirement for a sensitive environment, although outside of the designer’s control, reveals how a more nuanced interplay between luminaire and environment can be explored.

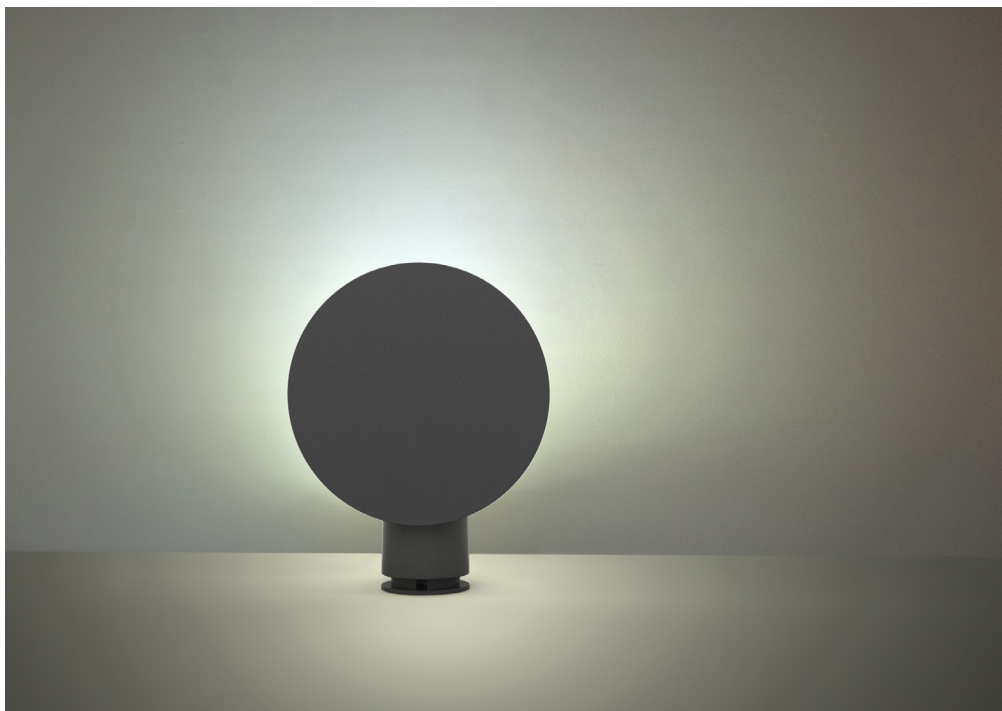
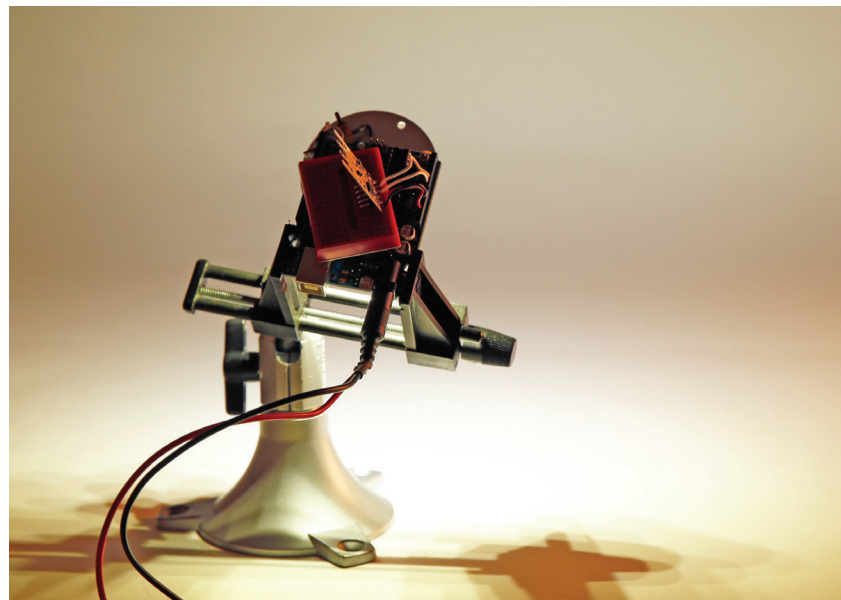


Figure 5 (left). Flicker.



Figures 6 and 7 (below left and below right). Work-in-progress images depicting early, functional prototypes of Flicker concept. Video can be viewed here: <http://vimeo.com/109959847>



Inverse shadow

Natural light constantly changes in response to weather, time and season. The more specific brief behind this concept, then, was to draw attention to such incidental effects of light which often escape our conscious attention.

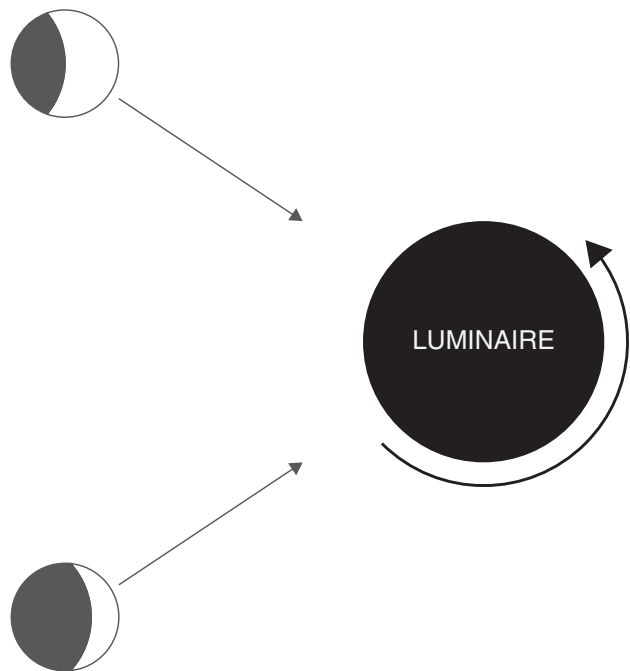
The Inverse Shadow concept is a luminaire which casts light in an inversion of the way in which shadows cast by objects in natural light change during the course of a day. By substituting shadow with light, it is hoped that Inverse Shadow may draw attention to the shifting nature of light and its capacity to locate us in our environment. The light 'shadow' slowly alters position and length over time in much the same way as a real shadow changes. The travel of the light happens so gradually that it might take time for the observer to register this change.

The angle and width of shadow is determined in a three step process, firstly the right ascension and declination is calculated, this is then converted into the Azimuth / Altitude coordinate system, and finally this vector is rotated to the plane which the *Inverse Shadow* is mounted. The first step represents an absolute direction from earth to the moon, this could be sourced from astronomical instruments but in this instance is found by use of the moon's orbital elements and formula derived from Kepler's laws³. The remaining steps require the location on earth and rotation with respect to North, and introduce location and season specific changes to the appearance. This

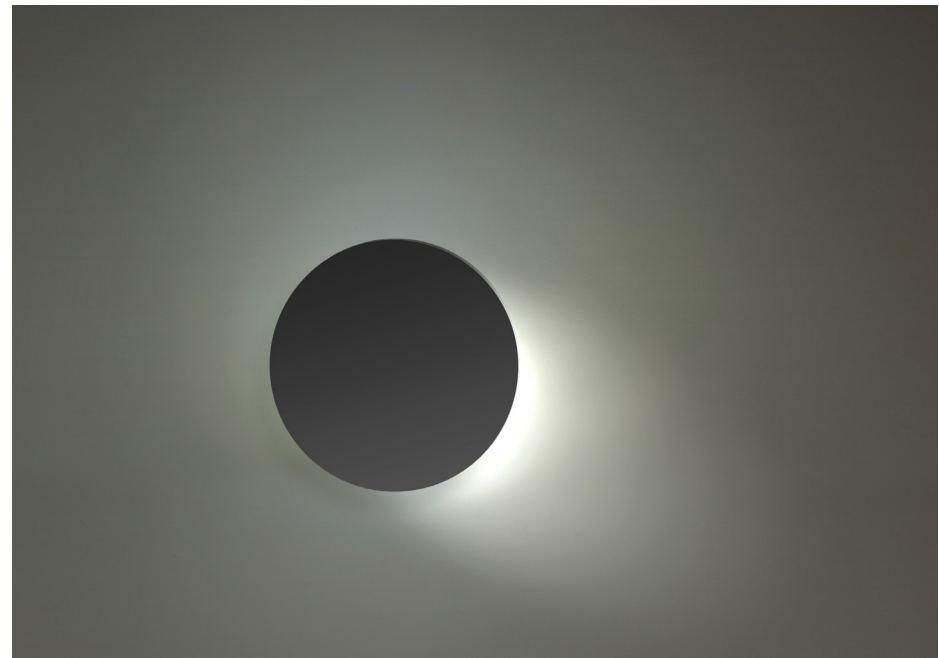
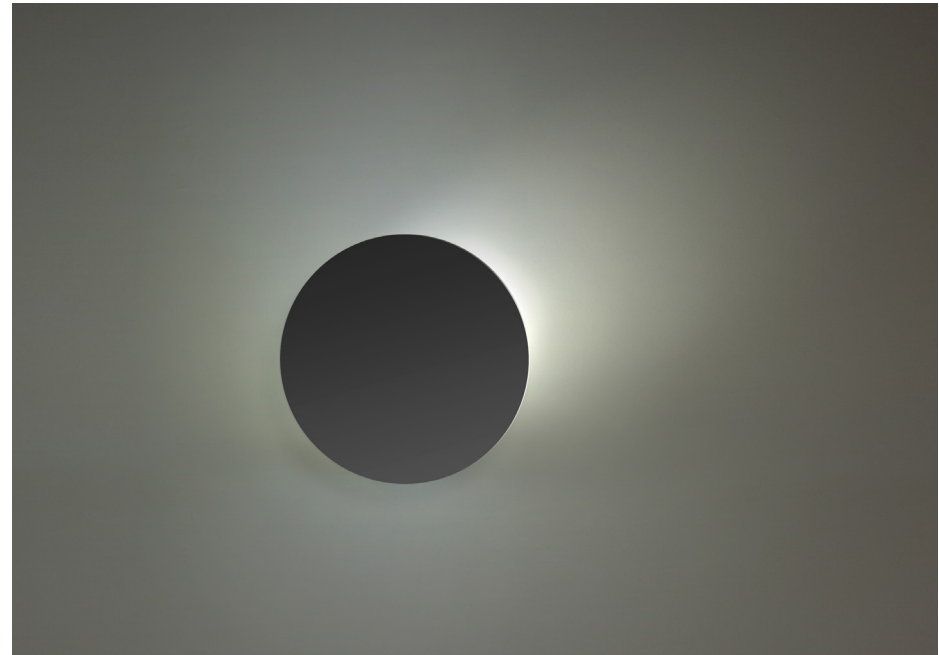
introduces a uniqueness to the piece; if produced in quantity, each piece would offer a different experience reflecting its location.

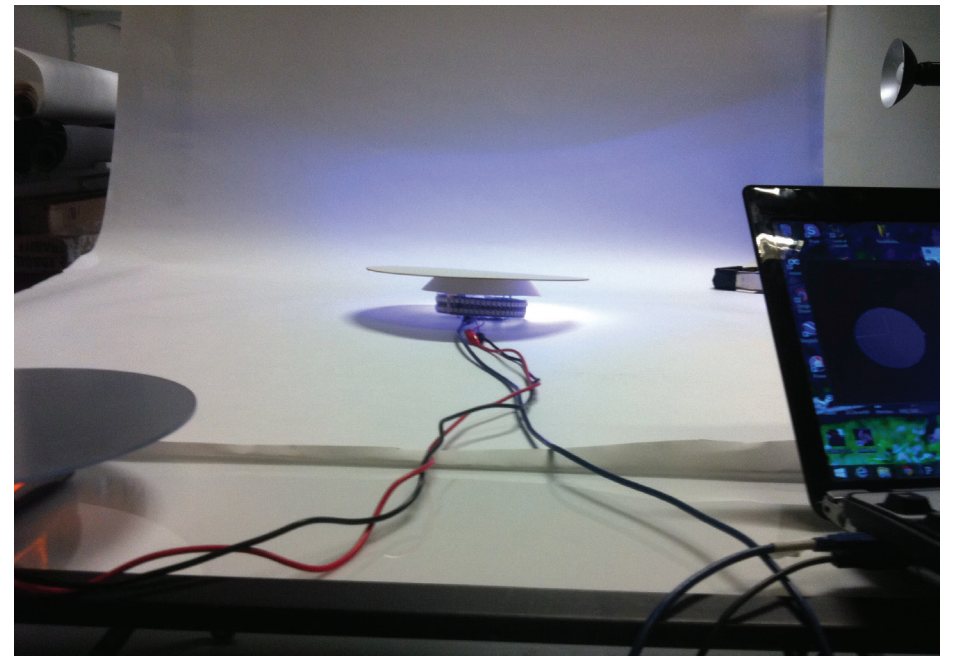
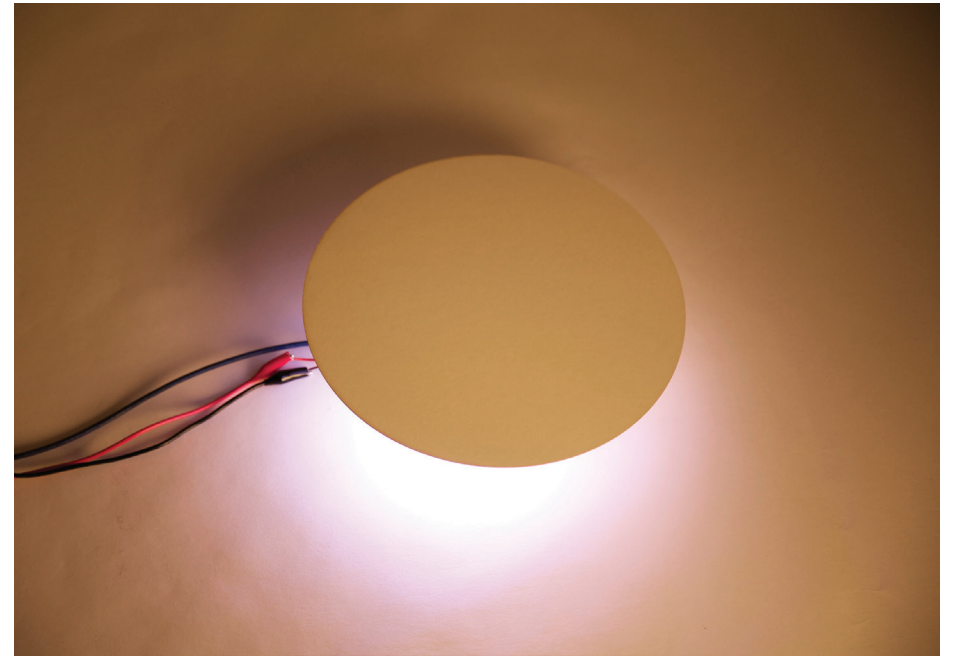
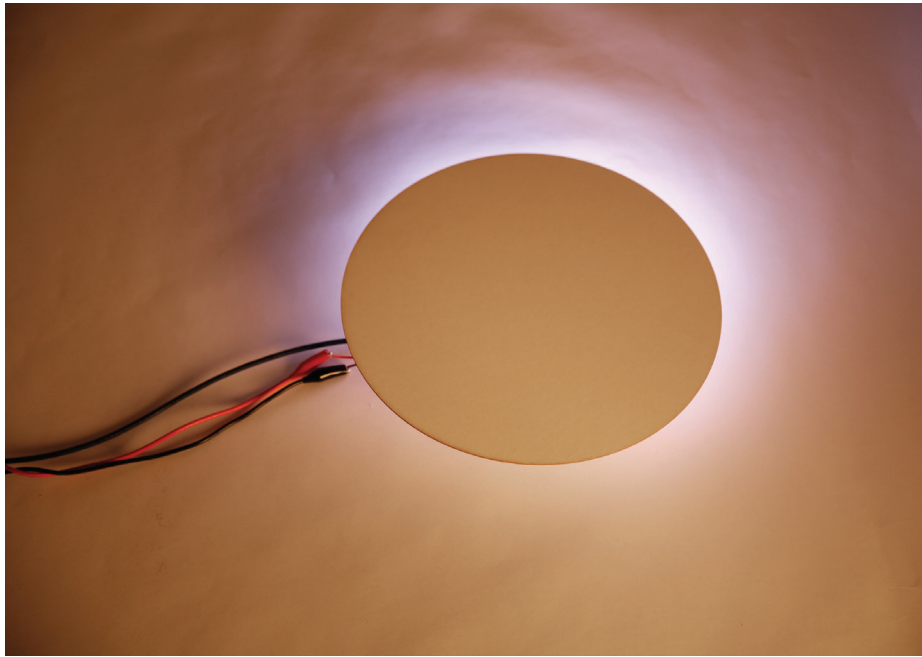
In contrast to the *Flicker* concept, where changes in light can be related to observable changes in the environment (the movement of air), the light emitted by the *Inverse Shadow* output alters according to an environmental stimulus that cannot be experienced directly. The piece may prompt contemplation of the travel of the moon but any imaginative response is in the abstract or 'discontinuous' with perception (Casey, 2000).

As with the *Flicker* concept, the form has been developed to be as unobtrusive as possible and to appear 'silhouetted' when illuminated. Earlier sketches envisaged a rectangular shade but a round form allows for a sense of the light 'orbiting'. The final concept uses a round brass reflector, painted in a matt black finish on the outer surface and sprayed white on the reflective surface. The final appearance of a black disc, with an illuminated halo, might conjure associations with an eclipse but this was not an intentional metaphor.



Figures 8-10. Inverse Shadow concept. Light emitted from behind a metal disc alters orientation and brightness dependent on the position of the moon.





Figures 11-13 (clockwise). Work-in-progress images depicting early, functional prototypes of Inverse Shadow concept. Video can be viewed here: <http://vimeo.com/109959850>

Outcomes

The practice to date has consciously sought to focus attention away from the luminaire as a recognizable form and as a manifestation of visual metaphor. Instead, attention has been dedicated to the qualities of the light produced. Using the proposed framework, the poetic qualities could be located at the experiential end of the continuum. From a phenomenological point of view, the designs seek to reveal a richness and subtlety of experiences that, through habituation, we often fail to see.

In becoming more conscious of the ephemeral qualities of light – qualities which we often experience at the periphery of awareness – the designer has sought to create artefacts which prompt discussion of the role of luminaires. The presented concepts, and practice, mark a shift from using lights to illuminate to treating the experience of light as an end in itself. The artefacts serve to stimulate a re-consideration of artificial lighting and offer examples of the ways in which design can evoke renewed awareness of experience.

The presented practice has attempted to redirect attention from the lighting object to the quality of light emitted. This has been done to foreground the experience of light itself. As part of constructing the proposed framework, future practice will be located at other points on the continuum (Figure 1). It is anticipated that further creative phases will explore the interplay of light with form and materiality; and cultural typologies of lighting; as way of examining how design objects can trigger imagination and association.

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